368

JVC

SERVICE MANUAL

STEREO CASSETTE DECK

MODEL TD-W20 A/B/C/E/G/J/U

Contents

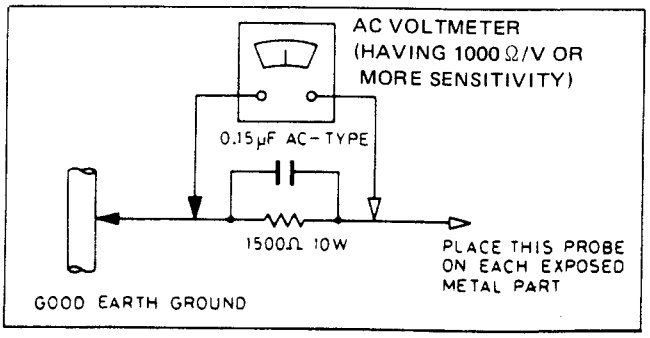
Safety precaution 2
Features 3
Specifications 3
Names of Parts and Their Functions 4
Location of Main Parts 5
Removal of Main Parts 6
Main Adjustments 8
Block Diagram 12
Wiring Connections 13
Standard Schematic Diagram of TD-W20 14
P. W. Board and Parts List 15
Exploded View of Enclosure Assembly 21
Exploded View of Mechanism Assembly 22
Dimensions 28
Packing 29
Accessories . . . . . Back Cover

368

No. 4256
August 1985

Safety precaution

1. The design of this product contains special hardware. Many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by then necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by (⚠) on the schematics and parts list in Service manual. The use of a substitutue replacement which does not have the same safety characterisitics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings barriers and/or the like to be separated from live parts, high temperature part, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.
5. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc,). Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method.
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or mroe sesitivity in the following manner. Connect a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.).
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured musy not exceed 0.75 V AC (r.m.s.).
     This corresponds to 0.5 mA AC (r.m.s.).



Features

1. **Two logic-control deck mechanisms**
   - Double-speed dubbing function reduces tape editing time by half.
2. **Dolby* B & C noise reduction systems**
   - Built-in MPX filter
3. **2-color 6-LED peak level indicator**
4. **Synchro-start dubbing**
5. **Metal tape compatibility**
6. **Auto tape select mechanism (deck A)**

* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

* "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Specifications

Type	: Stereo double cassette deck
Track system	: 4-track, 2-channel
Tape speed	: 1-7/8 inch/sec (4.8 cm/sec)
Frequency response	
0 dB recording	: Metal tape; 40—11,000 Hz (±3 dB)
	Chrome tape; 40—8,000 Hz (±3 dB)
	Normal tape; 40—8,000 Hz (±3 dB)
−20 dB recording	: Metal tape; 30—16,000 Hz
	40—15,000 Hz (±3 dB)
	Chrome tape; 30—16,000 Hz
	40—15,000 Hz (±3 dB)
	Normal tape; 30—15,000 Hz
	40—14,000 Hz (±3 dB)
S/N ratio	: 58 dB (S = 1 kHz, K3 = 3 %, N = A-weighted, Metal tape)
	The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz − 10 kHz with Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with Dolby B NR on.
Improvement of MOL	: 4 dB at 10 kHz with Dolby C NR on
Wow and flutter	: 0.08 % (WRMS)
	0.20 % (DIN 45 500)
Crosstalk	: 60 dB (1 kHz)
Harmonic distortion	: K3 ; 0.5 %, THD ; 1.0 % (metal tape, 1 kHz, 0 dB)
Heads	: Deck A; METAPERM head for playback
	Deck B; METAPERM head for recording/playback, 2-gap ferrite head for erasure
Motors	: Electronic governed DC motor for capstan/reel x 1 (for both decks A and B)
Fast forward/ Rewind time	: Approx. 100 sec with C-60 cassette
Input terminals	
Mic jack x 2	: Max. sensitivity; 0.4 mV (−68 dB V)
	Matching impedance; 600 Ω − 10 kΩ
Input jack x 2	: Max. input level; 80 mV
	Imput impedance; 50 kΩ
Output terminals	
Output jack x 2	: Output level; 300 mV
	Output impedance; 5 kΩ
Power requirement	: AC 240 V, 50/60 Hz (TD-W20A)
	AC 120 V, 60 Hz (TD-W20C/J)
	AC 240/220/115 V, 50/60 Hz (TD-W20U)
Power consumption	: With power on; 14 W
	With power switch standby; 0.8 W
Dimensions	: 17-1/8" (135 mm) W
	4-11/16" (118 mm) H
	9-1/8" (230 mm) D
Weight	: 8.8 lbs (4.0 kg)
Accessories	: Pin plug cord x 2

Design and specifications are subject to change without notice.

Names of Parts and Their Functions

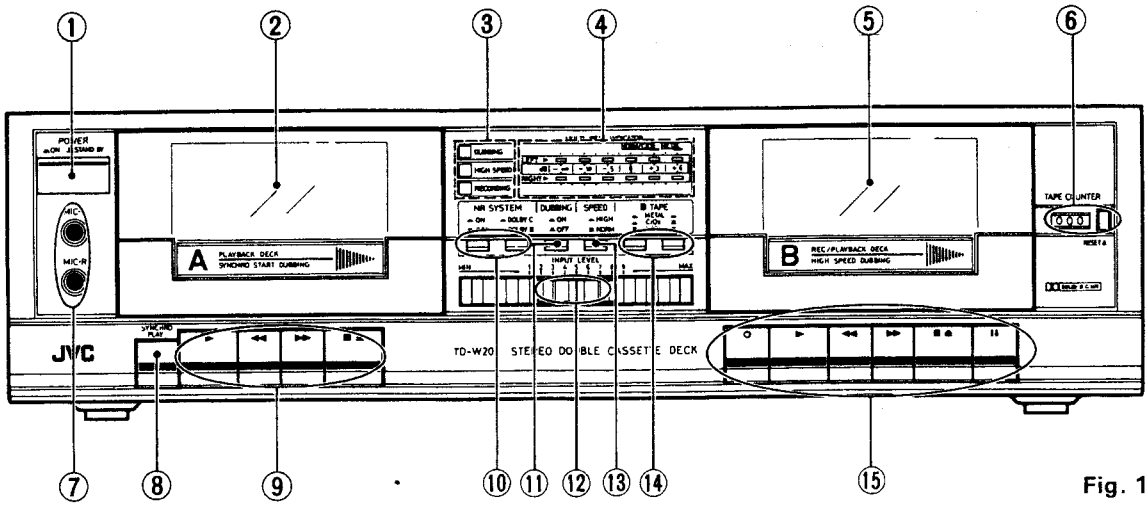


Fig. 1

① **POWER switch**

② **Cassette holder (deck A)**

③ **Indicators**

- **DUBBING**
  This lights to indicate that the unit is in the dubbing mode.
- **HIGH SPEED**
  This lights when in the double-speed dubbing mode.
- **RECORDING**
  Lights when deck B is in the recording and record pause mode.

④ **MULTI PEAK INDICATOR**

These indicate the recording level during recording and output level during playback. The LED indication varies with the signal strength during recording and playback.

⑤ **Cassette holder (deck B)**

⑥ **TAPE COUNTER and RESET button**

⑦ **MIC jacks (L[eft], R[ight])**

Connect microphones (with an impedance of 600 Ω to 10 kΩ) to these jacks.

With microphones connected to these jacks, the input to the LINE IN (REC) terminals is cut off automatically.

⑧ **SYNCHRO PLAY button**

Press this button when performing synchro-dubbing. Do not press this button other than for this purpose. (See page 14.)

⑨ **Cassette operation buttons (deck A)**

▶ **(play) button:**
Press to play the tape.

◀◀ **(rewind) button:**
Press to rewind the tape.

▶▶ **(fast forward) button:**
Press to fast forward the tape.

■/⏏ **(stop/eject) button:**
Press to stop the tape. Pressing this button after the tape stops opens the cassette holder. (The tape automatically stops when it reaches the end.)

⑩ **NR SYSTEM switches**

The left switch switches on and off the noise reduction circuits and the right switch selects which noise reduction system (Dolby B NR or Dolby C NR) is to be used.

⑪ **DUBBING switch**

Set to ON (▬) when dubbing from deck **A** to deck **B**.

⑫ **INPUT LEVEL control**

Adjust the recording level with this control.

⑬ **SPEED switch**

Used to switch the tape speed when dubbing.

(▬) HIGH : For double-speed dubbing

(▙) NORM: For normal-speed dubbing. Moreover, this is required when recording from the LINE IN input or MIC jacks. Set to this position except during double-speed dubbing.

⑭ **TAPE switches (deck B)**

When recording or playing back on deck **B**, select the correct setting according to the type of tape used.

⑮ **Cassette operation buttons (deck B)**

○ **(record) button:**
Press to record the tape.

II (pause) button:
Press to temporarily stop the tape in the record or playback mode. Press it again to release the pause mode and restart the tape.

The other operations of the buttons are the same as those of deck **A**.

Location of Main Parts

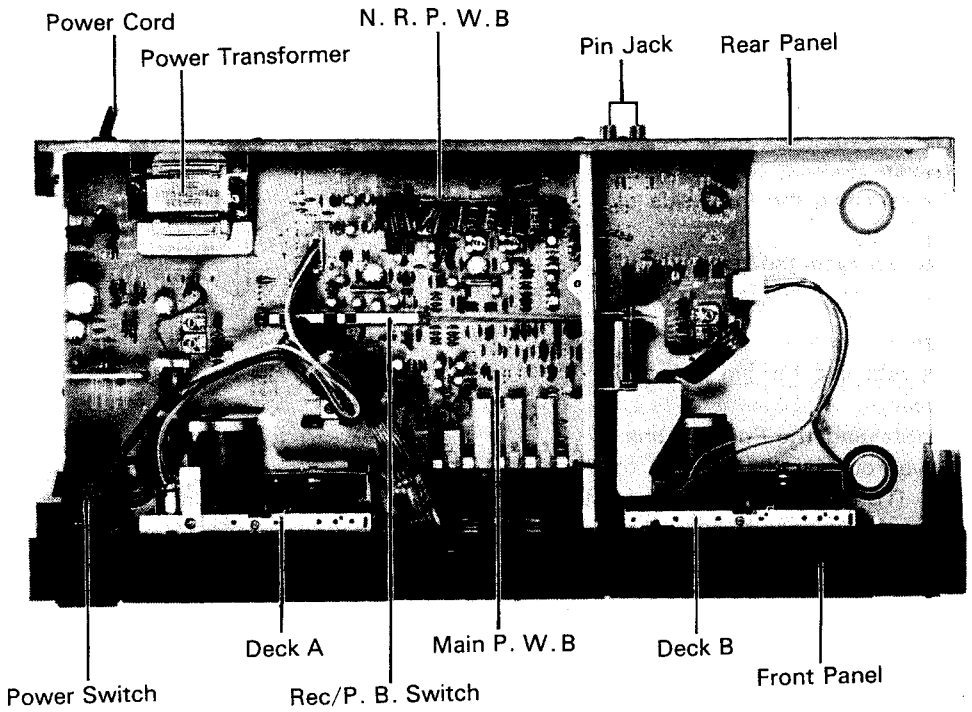


Fig. 2

Removal of Main Parts

Enclosure Section

- **Removal of Top Cover**
  1. Remove six screws retaining the both sides of the top cover.
  2. Remove two screws retaining the back side of the top cover.
- **Removal of Bottom Cover**
  1. Remove three screws retaining the front side of the bottom cover.
  2. Remove three screws retaining the rear side of the bottom cover.
- **Removal of Rear Panel**
  1. Remove three screws retaining the pin jack and chassis to the rear panel.
  2. Remove four screws retaining the Power Trans.
  3. Remove two plastic rivet retaining the DIN jack to from the rear panel. (TD-W20G)
- **Removal of Front Panel**
  1. Remove three screws ①, ② and ⑫ retaining the Front Panel.
  2. Remove one screw ③ retaining the earth wire with the mechanism ass'y.
  3. Pull out input level knobs.
- **Removal of Mechanism Ass'y**

  (Deck B)
  1. Remove the counter belt.
  2. Remove four screws ④ and ⑤ retaining the Deck B.
  3. Open the cassette lid by depressing the STOP/EJECT button.
  4. Remove the cassette holder from the mechanism ass'y by disengaging its fulcrums on the both sides. (See Fig. 5-B.)

  Note: When reassembling the cassette holder, set the holder spring in the right foot of the holder prior to reassembly.

  (Deck A)
  1. Remove four screws ⑥ and ⑦ retaining the Deck A.
  2. Open the cassette lid by depressing the STOP/EJECT button.
  3. Remove the cassette holder from the mechanism ass'y by disengaging its fulcrums on the both sides. (See Fig. 5-B.)

  Note: When reassembling the cassette holder, set the holder spring in the right foot of the holder prior to reassembly.
- **LED Indicator**

  Disengage five Pawls ⑪ retaining the indicator board ass'y.

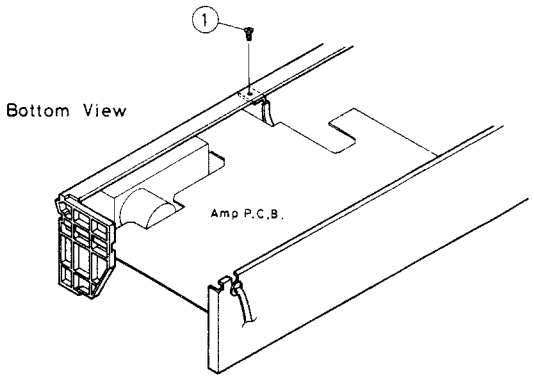


Fig. 3

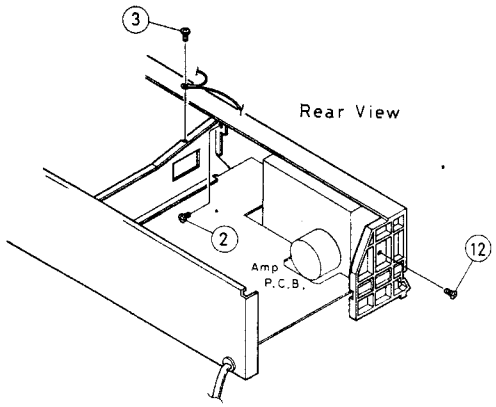


Fig. 4

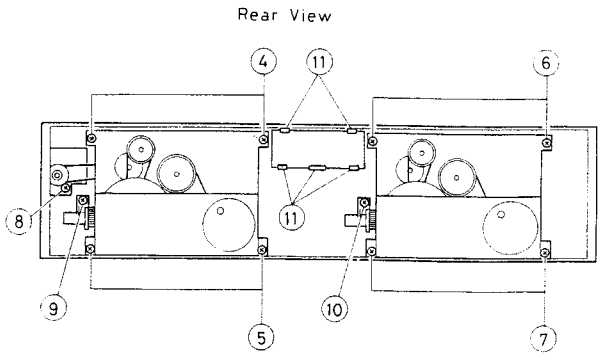


Fig. 5

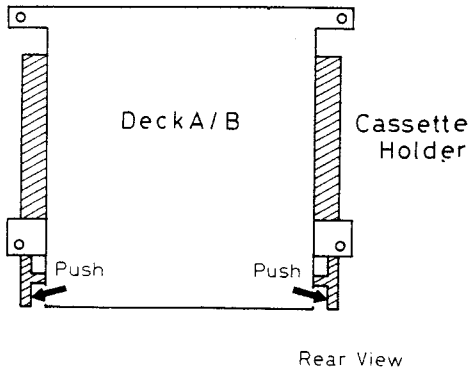


Fig. 6

■ **Removal of Power Switch (See Fig. 5)**

1. Push the switch knob outward to remove it.
2. Push the switch ass'y in the direction of the arrow to remove it.

Note : When reinstalling the switch ass'y :

1) Set the switch to its ON position.
2) Fix it as shown in the right figure.
3) Set the knob to the switch.

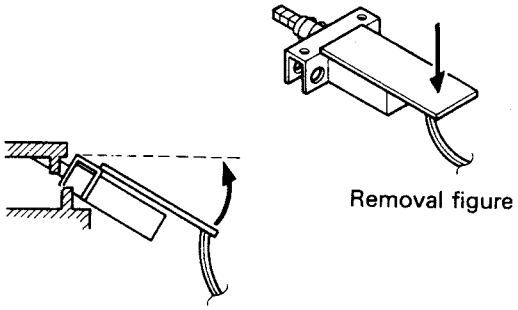


Fig. 7

Mechanical parts

- **Rec./PB head (Deck B) PB head (Deck A)**
  1) Remove two screws (31) for the button assembly.
  2) Remove a screw (32) .
  3) Loosen a screw (33) for adjustment.
- **Erase head (Deck B) Dumy head (Deck A)**
  1) Remove a screw (34) .
  2) Remove a screw (35) for adjustment.
- **Pinch roller arm assembly**
  1) Remove a stopper (36) holding its assembly, and pull it off from the shaft.
- **Supply reel disc assembly**
  1) Pull out the E ring (37) and remove its disc from the shaft.
- **Take-up reel disc**
  1) Pull out the E ring (38) and remove it from the shaft.
- **Motor**
  1) Remove three screws (39) , (40) and (41) fastening the FM bracket. (When removing the FM bracket (42), remove with the main belt (43) and the RF belt (44) .)
  2) Remove three screws (45) fastening the motor.
  3) Pull out the motor pulley from the motor shaft.

Note: Be careful not to stain the main belt and RF belt. (When assembling the motor pulley, adjust the pulley position as next figure.)

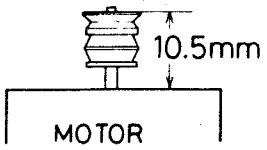


Fig. 8

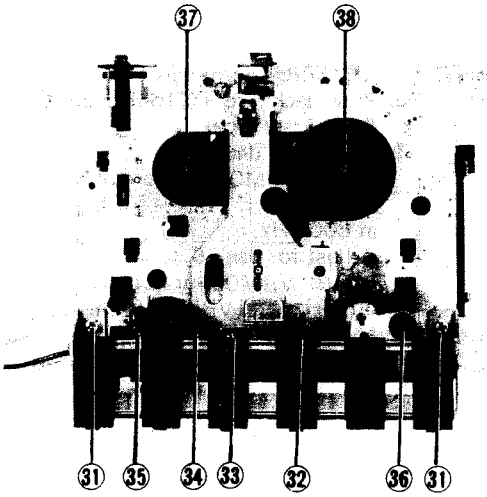


Fig. 9

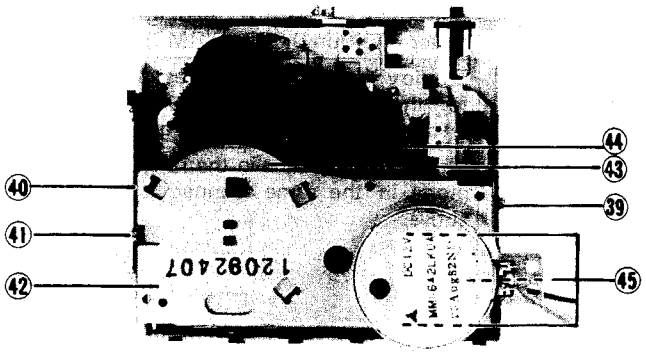


Fig. 10

- **Flywheel assembly**
  Pull out the flywheel from the capstan metal.

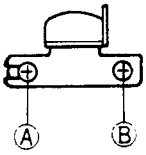
Main Adjustments

1. Equipment and measuring instruments used for adjustments

1) Electronic voltmeter
2) Audio frequency oscillator (range; 50–20 kHz and output 0 dB with impedance of 600 Ω)
3) Attenuator (impedance; 600 Ω)
4) Standard tapes for REC/PB
   Maxell UD – Normal (SF) tape –
   TDK SA – Chrome (SA) tape – or equivalent
   JVC ME – Metal tape –
5) Reference tape for playback (JVC Test Tape)
   TMT6451 (or VTT656A) (for tape speed, wow flutter adj.)
   VTT644 (or VTT724) (for playback level)
   VTT739 (for playback frequency response)
   TMT7008 (14 kHz) (for head azimuth adj.)
6) Resistor 600 Ω (for attenuator matching)
7) Distortion meter (bandpass filter)
8) Torque testing cassette gauge, CGT-N
9) Wow flutter meter
10) Frequency counter

2. Mechanism adjustment proceder

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting motor speed	1. Connect a frequency counter to the LINE OUT terminals. 2. Play back the TMT6451 (or VTT-655A) test tape. 3. Adjust for deck [A]: Adjust VRM03 for normal speed at 3000 Hz, and VRM01 for high speed at 6000 Hz. Adjust for deck [B]: Adjust VRM04 for normal speed at 3000 Hz, and VRM02 for high speed at 6000 Hz.	Deck [A]: Normal; VRM03 High; VRM01 Deck [B]: Normal; VRM04 High; VRM02	Normal speed: Deck [A]; 3000 Hz Deck [B]; 3000 Hz High speed: Deck [A]; 6000 Hz Deck [B]; 6000 Hz	For adjusting high speed, HI-SPEED test point should be grounded. Adjust high speed after perform normal speed.
Checking wow and flutter	Connect a wow and flutter meter to LINE OUT terminals. Play back the TMT6451 (or VTT656A) test tape. Check to see if the reading of the meter is within 0.08% (WRMS).		0.08% (WRMS) 0.2% (DIN 45500)	If the reading becomes moving value even if confirming to the standard, a re-claim may be raised. Repairs are necessary.
Checking playback torque	Employ a torque testing cassette tape for the checking, or remove the cassette cover and use a torque gauge.		35–75 gr-cm	If the standard torque is not obtained, replace the take-up disk assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		More than 70 gr-cm	If the standard torque is not obtained, perform the following. 1. Clean the capstan belt, the idler circumference, the motor pulley, the take-up reel disk circumference, the flywheel circumference, etc. 2. Replace the belt and idler.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		More than 70 gr-cm	If the standard torque is not obtained, clean the capstan belt, idler, motor pulley, flywheel circumference, rewinding idler circumference, left reel disk circumference, etc.

Item	Adjustment	Adjusting point	Standard value	Remarks
Checking auto-stop opeartion	Play back the tape. In playback mode, check that the tape run stops within 3 sec at the end of the tape. In fastforward or rewind mode, check that the tape stops within 5 sec at the tape end.		Play mode: within 3 sec FF/REW mode: within 5 sec	
Adjusting REC/PB head azimuth 	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the TMT7008 test tape. 3. Adjust the head angle with the screw A until the reading of the electronic voltmeter becomes maximum for both channels. 4. After adjusting, set the screw with screw bond.	Screw A (left side) each Deck [A] Deck [B]	Maximum	If the head is worn, disconnected or exceedingly magnetized so as not to provide the necessary characteristics, replace it with a new one. After replacement, the head position adjustment as well as the playback level adjustment, the bias current adjustment and the recording level adjustment are all necessary. If the output difference between the left and right channels exceeds 3–4 dB, the head is defective. Replace it with a new one.

3. Electrical adjustments location

- **Main Amp P. W. Board (parts assembly side view)**
  (Turning in the direction of the arrow increases the level.)

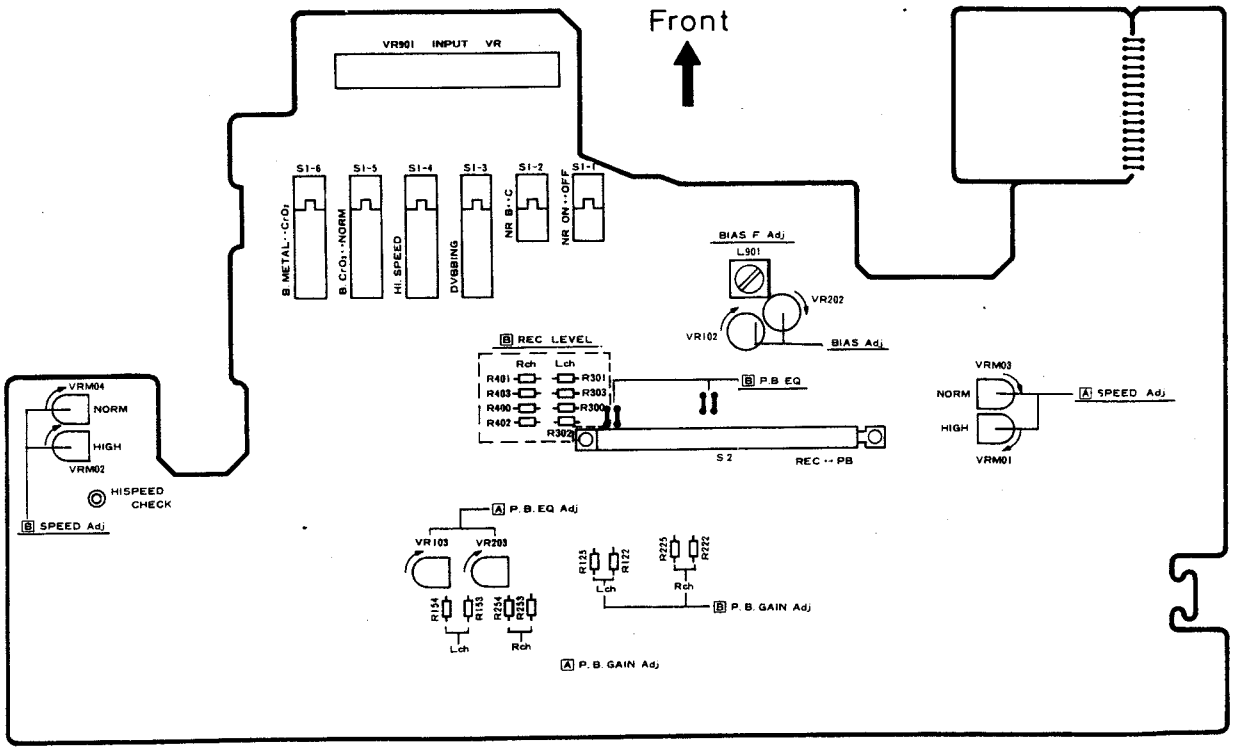


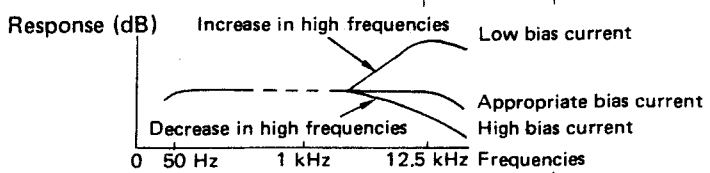
Fig. 11

4. Electrical circuit adjustment procedure

Perform the tape transport checks and head azimuth adjustment before following checks and adjustments.
Adjustment should be performed in the order of alignment steps.
In the steps marked with an asterisk (*), adjustment should be performed after replacing the heads.
Perform this adjustment with the NR switch set to OFF.

Step	Item	Check and Adjustment			
1	Checking DOLBY circuit (Rec mode) (BIAS, CUT)			Input signal(Frequency, level)	Output raise value, deviation value
		Signal input: LINE IN Cal. level: 400 Hz, −6 dBs Output terminal: NR. TP	DOLBY B (Rec)	1 kHz, Cal. −40 dB	+5.7 dB ± 1 dB
				5 kHz, Cal. −20 dB	+3.5 dB ± 1.5 dB
				1 kHz, Cal.	0 dB ± 1 dB
			DOLBY C (Rec)	1 kHz, Cal. −40 dB	+17 dB ± 1.5 dB
				5 kHz, Cal. −20 dB	+3.5 dB ± 1.5 dB
				1 kHz, Cal.	0 dB ± 1 dB

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
*2	Confirming playback gain	Play back VTT644 (or VTT724), then confirm that the level at LINE OUT is [A] −7dBs ± 1.5dB, [B] −8dBs ± 1.5dB	Deck A L:R153, R154 R:R253, R254 Deck B L:R122, R125 R:R222, R225	[A] −7 ± 1.5dB [B] −8 ± 1.5dB	When the head is replaced, adjust playback gain level. Deck A L:R153 cut by +1dB R154 cut by −1dB R:R253 cut by +1dB R254 cut by −1dB Deck B L: R122 cut by +1dB R125 cut by −1dB R:R222 cut by +1dB R225 cut by −1dB
*3	Playback frequency response	Deck A: Play back VTT739, then confirm that the level of 1 kHz and 10 kHz signals is 0.5 ± 2 dB. Deck B: Before adjustment, disconnect B72, B73 (L-ch) and B75, B76 (R-ch) so that the outputs of 1 kHz and 10 kHz signals are flat.	DeckA L:VR103 R:VR203 DeckB L:B72, B73 L:B75, B76	Deck A: 0 ± 2 dB Deck B: 0 ± 2 dB	B72 cut by −1dB B73 cut by −2dB B75 cut by −1dB B76 cut by −2dB
*4	Adjusting bias frequency	Connect the frequency counter to the C925 Lead through a 1.2 MΩ resistor, then adjust L901 so that the counter reads 95 kHz.	L901	95 kHz ± 10%	METAL Position
*5	Recording frequency response	1) NR switch: OFF 2) Record a 1 kHz signal at an input reference level of −20 dB, then record 50 Hz and 12.5 kHz signals and play them back. At this time, adjust VR102 and VR202 so that the deviation of 50 Hz and 12.5 kHz outputs satisfy the standard values with respect to 1 kHz output.	For Normal tape: L:VR102 R:VR202	With respect to 1 kHz reference: At 50 Hz, 0 ± 3 dB; At 12.5 kHz, 0 ± 3 dB	CrO_2 50Hz 0 ± 3dB 12.5kHz 0 ± 4dB Metal 50Hz 0 ± 3dB 12.5kHz + 1 ± 4dB



Step	Item	Adjustment	Adjusting point	Standard value	Remarks
*6	Recording gain	1) Apply a 1kHz signal to the LINE IN terminals, record a 1kHz signal at 0 dB input for both L and R channels on a normal tape. 2) Play back the recorded part, and adjust the recording level controls so that LINE OUT terminal level becomes −8 dBs with peak level indicator reading 0. Then adjust VR104 and VR204 so that LINE OUT terminal level becomes −8 dBs.	For Normal tape: L:R300 R302 R303 R301 R:R400 R402 R403 R404	−8 ± 2.5 dB (CrO_2 −8±3dB Metal −8±3dB)	Perform the adjustment using a normal tape. Level difference between recording and playback for VX/CrO_2 and metal tapes should be less than 1.5 dB, and that between left and right channels should also be less than 1 dB. L:R300 cut by +1.4dB R302 cut by +0.5dB R303 cut by −1.3dB R301 cut by −2.5dB R:R400 cut by +1.4dB R402 cut by +0.5dB R403 cut by −1.3dB R401 cut by −2.5dB
*7	Checking record/playback distortion	1) Record a 1 kHz, −8 dB signal to LINE IN terminals and perform recording with the peak level indicator reading 0. 2) Play back the recorded part. Check the output with a distortion meter to see if the value conforms to the standard value.		Normal tape: Less than 2% CrO_2 tape: Less than 3% Metal tape: Less than 2% (THD)	Be sure to perform this checking following bias current and recording level checking.
8	Checking signal to nosie ratio in recording/playback	1) Record a 1 kHz, 0 dB signal. Stop the input by disconnecting from the terminal to perform non-signal recording. 2) Play back the recorded part. Measure the 0 dB recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.		Normal, CrO_2 & Metal tapes: More than 42 dB	Apply an input level to LINE IN terminals with the recording level controls set to maximum so that the peak level indicator reads 0 dB.
9	Checking erasing coefficient	1) Apply a 1 kHz signal to the LINE IN terminals. Adjust the recording level controls until the peak level indicator reads 0 dB. 2) Perform recording with the signal enhanced by 20 dB. 3) Erase a part of the recording. 4) Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.		More than 65 dB	For the measurement using a metal tape, connect a band pass filter between the deck and the electronic voltmeter. Input (1 kHz 0 VU +20 dB) → Tape deck (recording, erasing) (1 kHz) Band pass Filter → Electronic voltmeter

I.C. HA12088

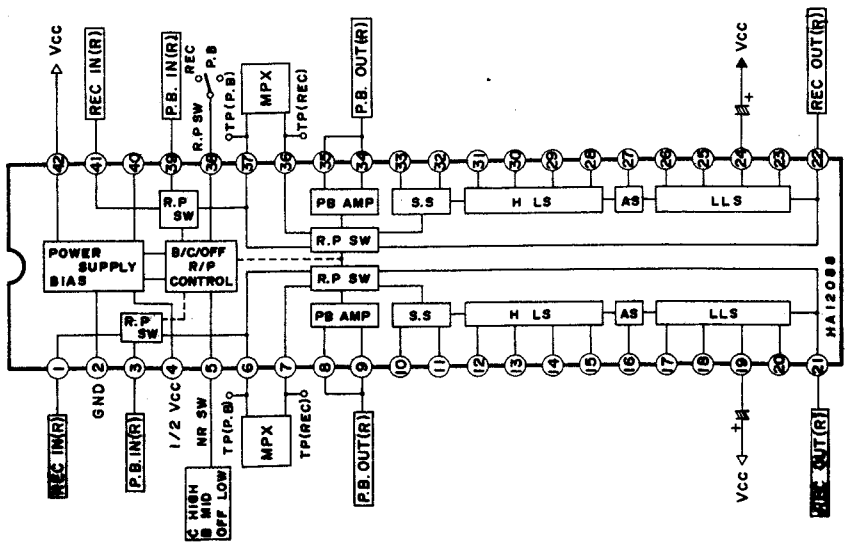


Fig. 12

Block Diagram

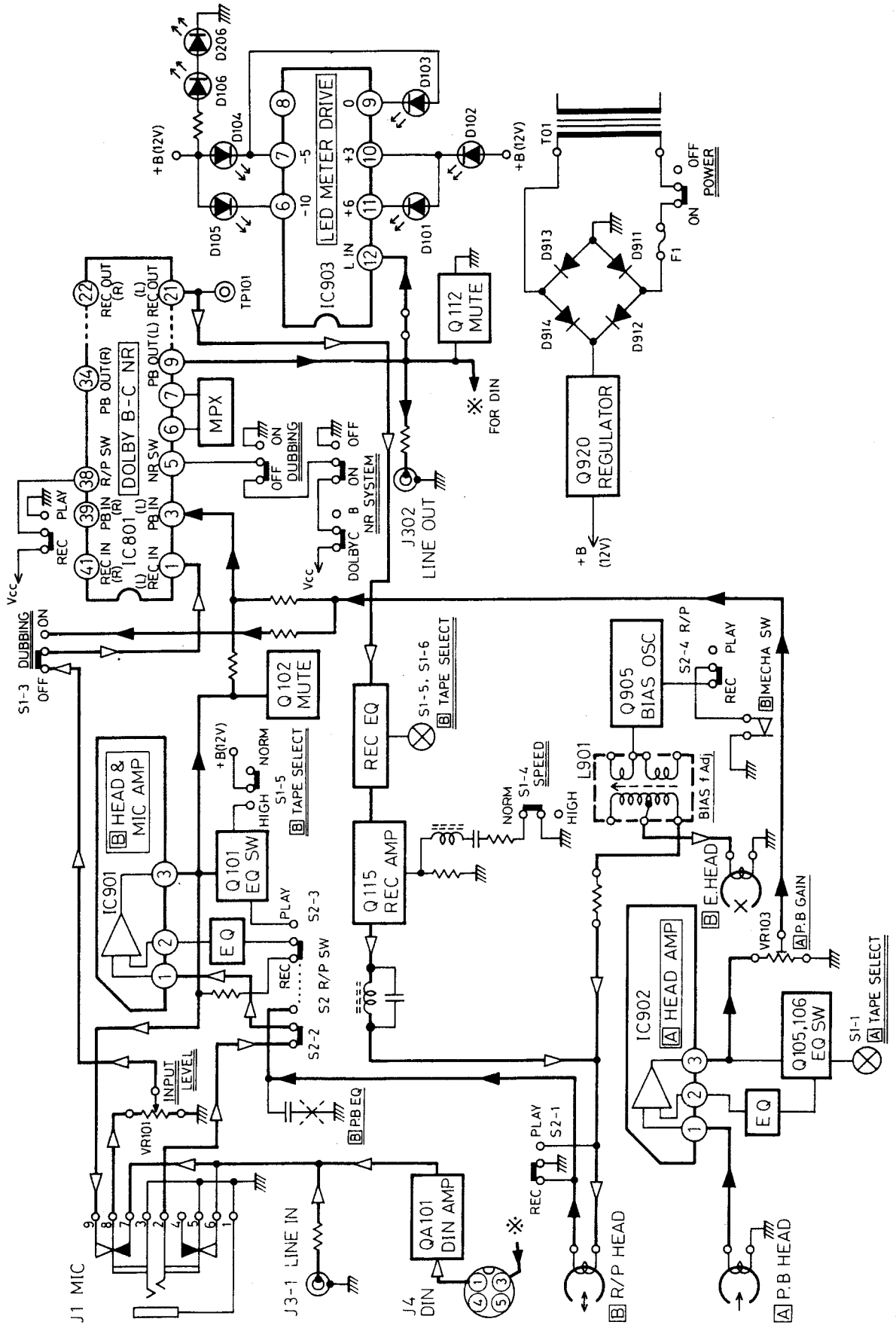
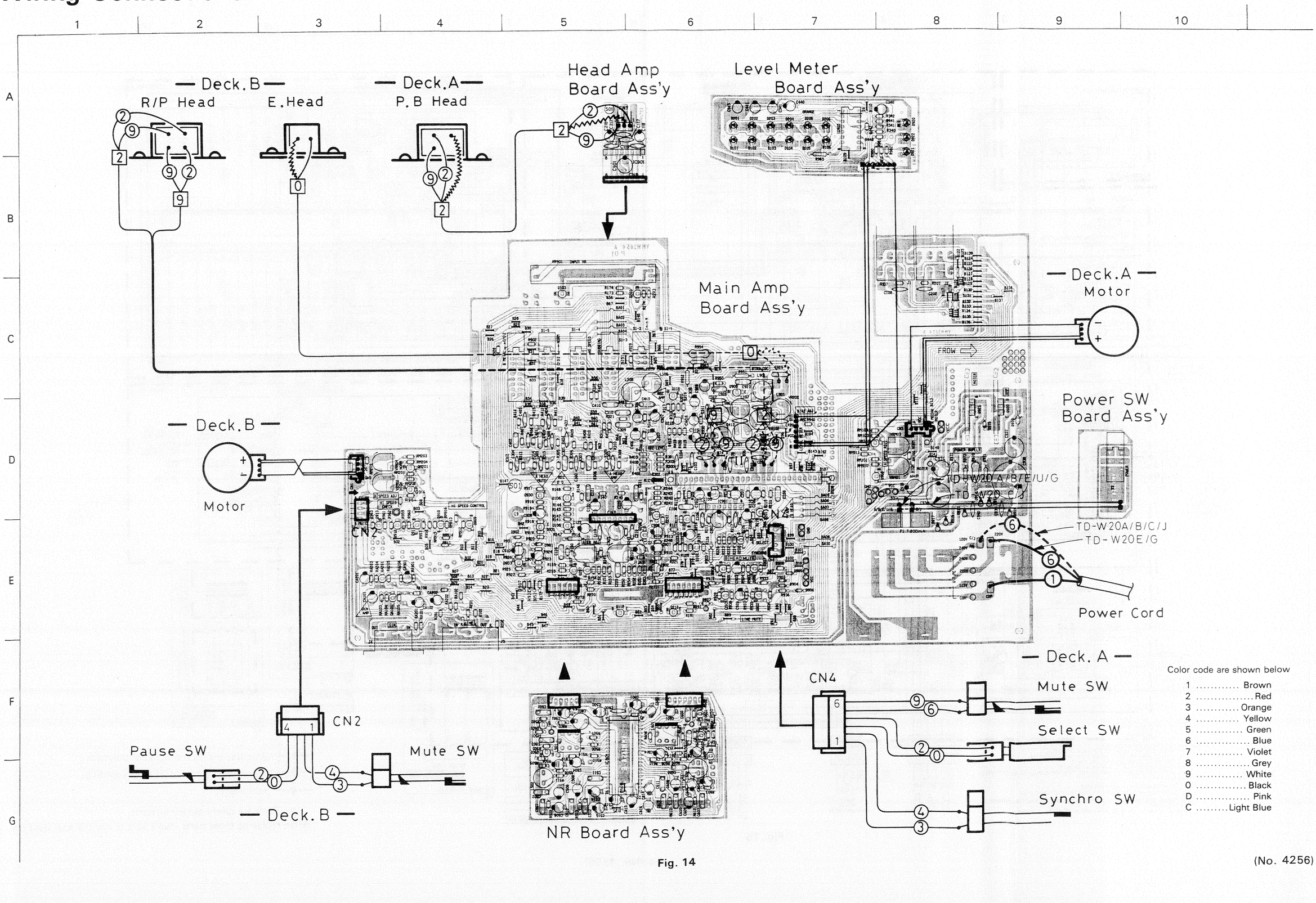


Fig. 13

Wiring Connections

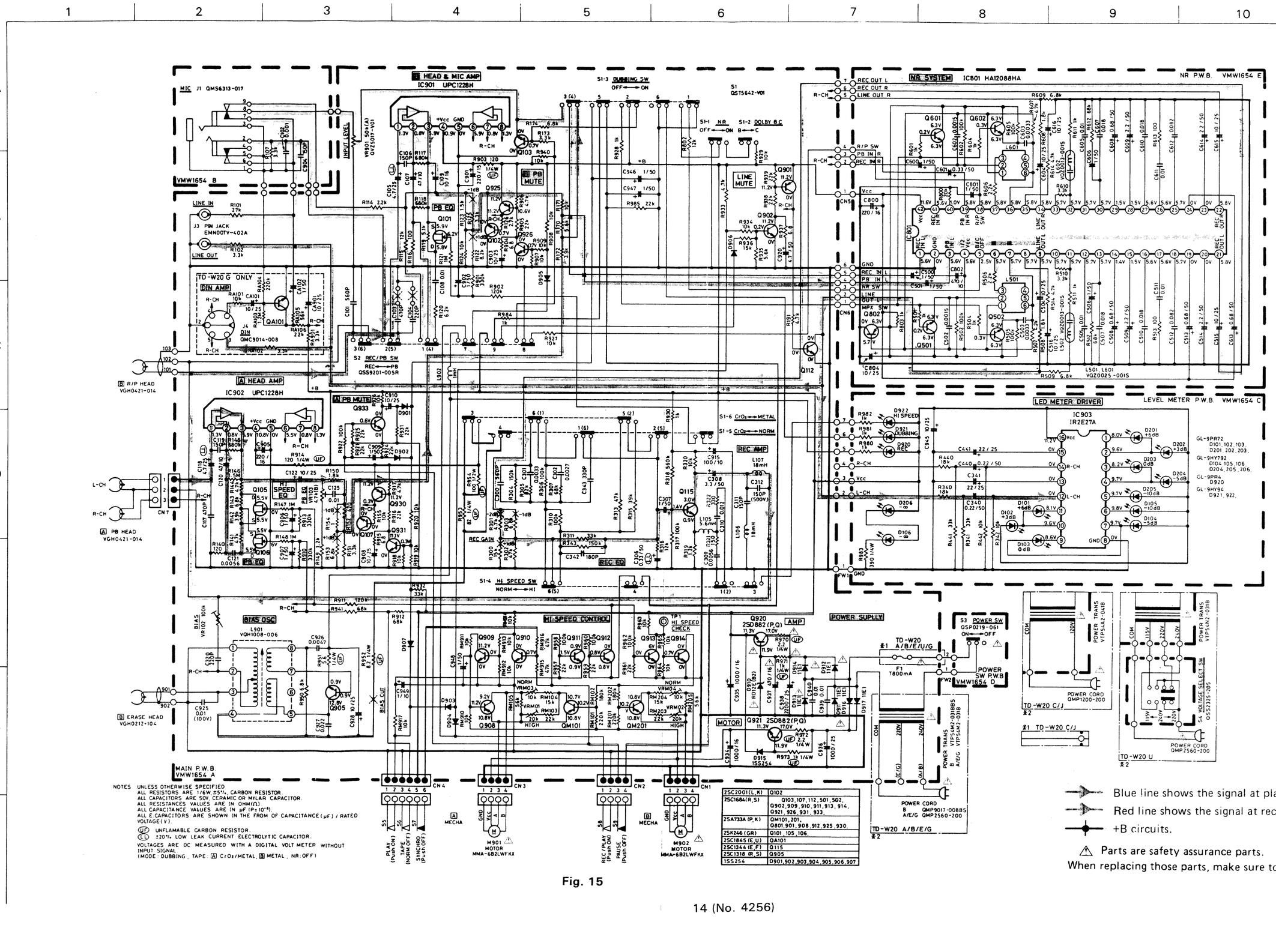


Color code are shown below

1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Grey
9	White
0	Black
D	Pink
C	Light Blue

Fig. 14

Standard Schematic Diagram of TD-W20

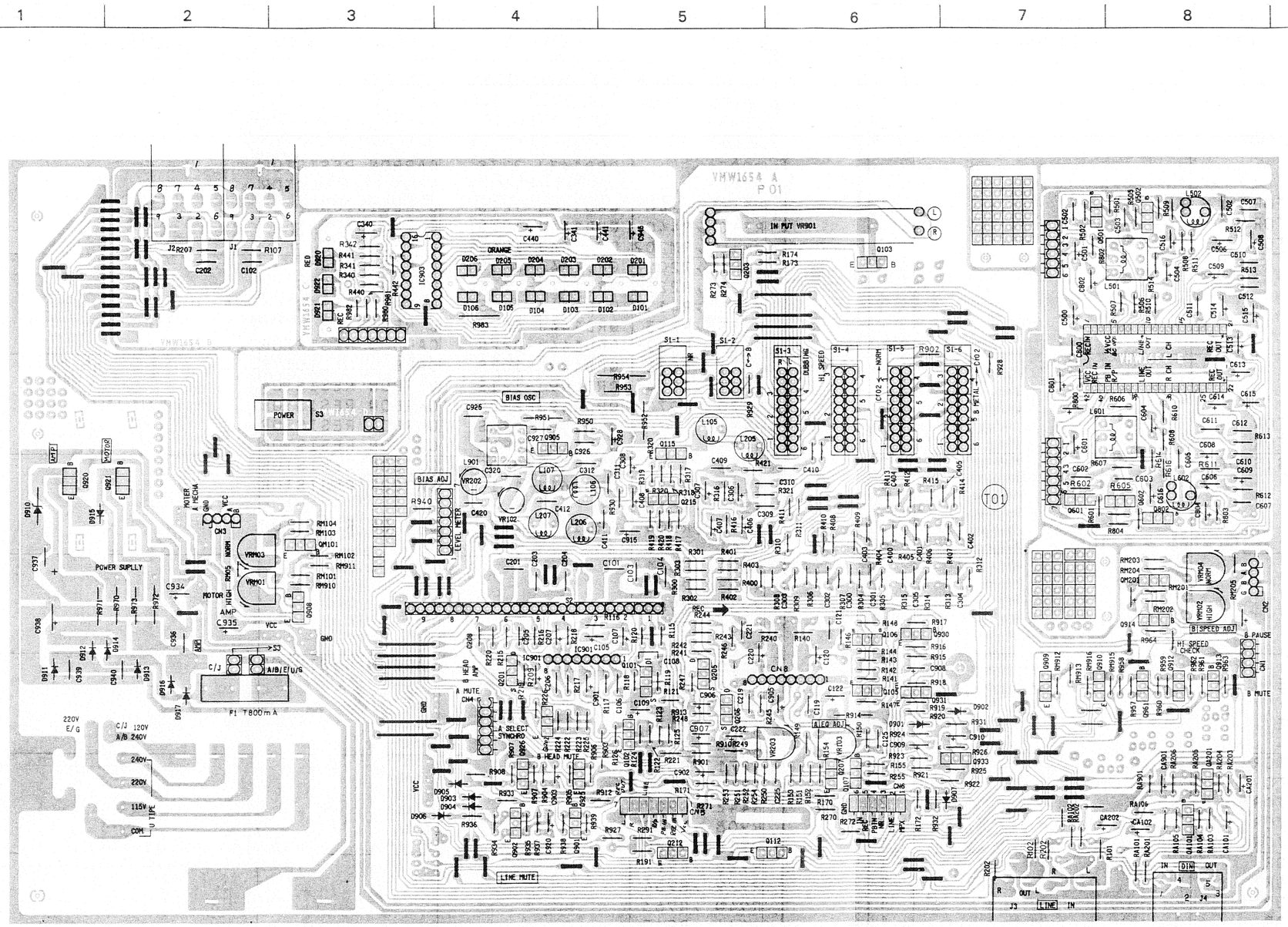


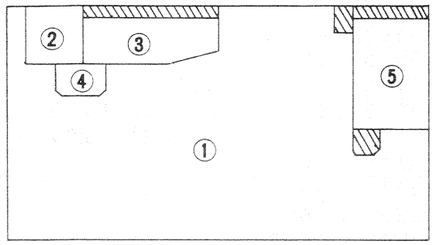
NOTES UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
ALL CAPACITORS ARE 50V, CERAMIC OR MYLAR CAPACITOR.
ALL RESISTANCES VALUES ARE IN OHM(Ω).
ALL CAPACITANCE VALUES ARE IN μF (P=10⁻⁶).
ALL E.CAPACITORS ARE SHOWN IN THE FROM OF CAPACITANCE(μF) / RATED VOLTAGE(V).
(UF) UNFLAMABLE CARBON RESISTOR.
(LL) ±20% LOW LEAK CURRENT ELECTROLYTIC CAPACITOR.
VOLTAGES ARE DC MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
(MODE : DUBBING, TAPE : A CrO₂/METAL, B METAL, NR:OFF)

2SC2001(L,K)	Q102
2SC1684(R,S)	Q103,107,112,501,502, Q902,909,910,911,913,914, Q921,926,931,933,
2SA733A (P,K)	QM101,201, Q801,901,908,912,925,930,
2SK246 (GR)	Q101,105,106,
2SC1845 (E,U)	QA101
2SC1344 (E,F)	Q115
2SC1318 (R,S)	Q905
1SS254	D901,902,903,904,905,906,907

Fig. 15

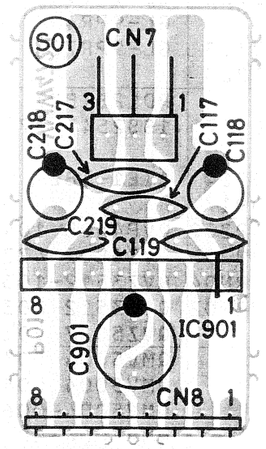
P. W. Board and Parts List (Pattern Side)





1. Main Amp P. W. B.
2. MIC P. W. B.
3. Level Meter P. W. B.
4. Power SW P. W. B.
5. NR P. W. B.

Head Amp P.W.B.



Parts Side

Fig. 16

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	IC801	HA12088NT	DOLBY IC		1
	IC903	IR2E27A	I.C		1
	IC901,IC902	UPC1228H	I.C		2
	QM101,QM201	2SA733A(P,K)	TRANSISTOR		8
	Q802 ,Q901				
	Q908 ,Q912				
	Q925 ,Q930				
	Q905	2SC1318(R,S)	TRANSISTOR		1
	Q115 ,Q215	2SC1344(E,F)	TRANSISTOR		2
	Q103 ,Q107	2SC1684(R,S)	TRANSISTOR		19
	Q112 ,Q207				
	Q212 ,Q501				
	Q502 ,Q601				
	Q602 ,Q902				
	Q909 -Q911				
	Q913 ,Q914				
	Q926 ,Q931				
	Q933				
	QA101,QA201	2SC1845(E,U)	TRANSISTOR		2
	Q102 ,Q202	2SC2001(L,K)	TRANSISTOR		2
	Q920 ,Q921	2SD882(Q,P)	SI.TRANSISTOR		2
	Q101 ,Q105	2SK246(GR)E2	FET		6
	Q106 ,Q201				
	Q205 ,Q206				
	D104 -D106	GL-9HY792	L.E.D		6
	D204 -D206				
	D921 ,D922	GL-9HY94	L.E.D		2
	D920	GL-9PR4	L.E.D		1
	D101 -D103	GL-9PR72	L.E.D		6
	D201 -D203				
	D910	RD12E(B2)	Z.DIODE		1
	D901 -D907	1SS254T-77	SI.DIODE		8
	D915				
⚠	D911 -D914	11E1-TB2	SI DIODE		6
	D916 ,D917				
	VR102,VR202	QVP4A0B-104	V.RESISTOR		2
	VR103,VR203	QVZ1802-472	V RESISTOR		2
	VRM03,VRM04	QVZ3512-103	V.RESISTOR		2
	VRM01,VRM02	QVZ3512-203	V.RESISTOR		2
	VR901	QVZ5017-V01	V.RESISTOR		1
	CN7	QMV5004-003	CONNECTOR		1
	CN2	QMV5004-004	CONNECTOR		1
	CN6	QMV5004-006	CONNECTOR		1
	CN5	QMV5004-007	CONNECTOR		1
	CN1 ,CN4	QMV5005-006	PLUG		1
	CN8	VMZ0028-008	MINI PIN		1
	S3	QSP0219-061	PUSH SWITCH	POWER SWITCH	1
	S4	QSS2325-205	SLIDE SWITCH	TD-W20U V.SELECT	1
	S2	QSS9201-005R	SLIDE SWITCH	REC/PB	1
	S1	QST5642-V01	PUSH SWITCH	SELECT	1
	L901	VQH1008-006	COIL		1
	L902	VQP0001-102S	INDUCTOR		1
	L106 ,L107	VQP0001-183S	INDUCTOR		4
	L206 ,L207				
	L105 ,L205	VQP0001-562S	INDUCTOR		2

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	L502 ,L602	VQZ0013-001S	FILTER		2
	L501 ,L601	VQZ0025-001S	FILTER		2
⚠	R954	QRD129J-101	CARBON RESISTOR		1
	R983	QRD141J-391S	CARBON RESISTOR		1
	R214	QRD143J-222S	CARBON RESISTOR		1
	R985	QRD143J-223S	CARBON RESISTOR		1
	R154 ,R254	QRD144J-1R0S	CARBON RESISTOR		2
	R140 ,R240	QRD144J-121S	C RESISTOR		2
	R340 ,R440	QRD144J-183S	C RESISTOR		2
	RM102,RM202	QRD144J-184S	C RESISTOR		2
	R101 ,R201	QRD144J-273S	C RESISTOR		2
	R125 ,R225	QRD144J-332S	CARBON RESISTOR		2
	R315 ,R415	QRD144J-393S	CARBON RESISTOR		2
	R153 ,R253	QRD144J-682S	C RESISTOR		2
	R122 ,R222	QRD144J-822S	CARBON RESISTOR		2
	R971 ,R973	QRD149J-102S	CARBON RESISTOR		2
	R903 ,R914	QRD149J-121S	CARBON RESISTOR		2
⚠	R970 ,R972	QRD149J-2R2S	CARBON RESISTOR		2
	R951	QRD149J-5R6S	CARBON RESISTOR		1
⚠	R952	QRD149J-8R2S	CARBON RESISTOR		1
⚠	R953	QRD149J-820S	CARBON RESISTOR		1
	R116 ,R216	QRD161J-101	CARBON RESISTOR		4
	R513 ,R613				
	R501 ,R504	QRD161J-102	CARBON RESISTOR		13
	R511 ,R601				
	R604 ,R611				
	R803 ,R928				
	R930 ,R980				
	R981 ,R982				
	R984				
	RA101,RA201	QRD161J-103	CARBON RESISTOR		32
	RM910-RM914				
	RM917,R124				
	R155 ,R171				
	R224 ,R255				
	R271 ,R320				
	R342 ,R420				
	R442 ,R907				
	R908 ,R909				
	R918 -R920				
	R926 ,R927				
	R929 ,R934				
	R940 ,R963				
	R964 ,R965				
	R306 ,R310	QRD161J-104	CARBON RESISTOR		14
	R317 ,R406				
	R410 ,R417				
	R502 ,R505				
	R602 ,R605				
	R922 ,R958				
	R960 ,R962				
	R121 ,R147	QRD161J-105	CARBON RESISTOR		6
	R148 ,R221				
	R247 ,R248				
	R149 ,R249	QRD161J-122	CARBON RESISTOR		4

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	R319 ,R419 R115 ,R215 R316 ,R416 R802	QRD161J-123	CARBON RESISTOR		5
	R902 ,R911	QRD161J-124	CARBON RESISTOR		2
	RA103,RA203	QRD161J-125	C RESISTOR		2
	R321 ,R421	QRD161J-151	CARBON RESISTOR		2
	R123 ,R223	QRD161J-152	CARBON RESISTOR		2
	RM104,RM204 R300 ,R400	QRD161J-153	CARBON RESISTOR		5
	R936 R304 ,R343 R404 ,R443	QRD161J-154	CARBON RESISTOR		4
	R146 ,R246	QRD161J-155	CARBON RESISTOR		2
	R150 ,R250	QRD161J-182	CARBON RESISTOR		4
	R508 ,R608 R800	QRD161J-203	CARBON RESISTOR		1
	R114 ,R506 R606	QRD161J-222	CARBON RESISTOR		3
	RA106,RA206	QRD161J-223	CARBON RESISTOR		15
	RM103,RM203 R905 ,R916 R921 ,R924 R925 ,R931 R938 ,R939				
	R957 ,R959 R961 RA104,RA204 RM101,RM201	QRD161J-224	CARBON RESISTOR		4
	R126 ,R226	QRD161J-272	CARBON RESISTOR		2
	R322 ,R422	QRD161J-331	CARBON RESISTOR		2
	RA102,RA202 R102 ,R107 R151 ,R173 R202 ,R207	QRD161J-332	CARBON RESISTOR		12
	R251 ,R273 R510 ,R610 R311 ,R341 R411 ,R441 R932	QRD161J-333	CARBON RESISTOR		5
	RA901,R901 R910 ,R913	QRD161J-334	CARBON RESISTOR		4
	R142 ,R172 R242 ,R272	QRD161J-392	CARBON RESISTOR		4
	R152 ,R252	QRD161J-471	CARBON RESISTOR		2
	R141 ,R144 R191 ,R241 R244 ,R291 R301 ,R401 R507 ,R514	QRD161J-472	CARBON RESISTOR		15
	R607 ,R614 R906 ,R917 R933 RM915,RM916 R302 ,R313	QRD161J-473	CARBON RESISTOR		6

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	R402 ,R413				
	R119 ,R219	QRD161J-512	CARBON RESISTOR		2
	R170 ,R270	QRD161J-562	CARBON RESISTOR		3
	R935				
	RA105,RA205	QRD161J-563	CARBON RESISTOR		4
	RM105,RM205				
	R318 ,R418	QRD161J-564	CARBON RESISTOR		2
	R904 ,R915	QRD161J-6R8	CARBON RESISTOR		3
	R937				
	R120 ,R220	QRD161J-622	C RESISTOR		2
	R143 ,R174	QRD161J-682	CARBON RESISTOR		9
	R243 ,R274				
	R303 ,R403				
	R509 ,R609				
	R950				
	R307 ,R407	QRD161J-683	CARBON RESISTOR		6
	R512 ,R612				
	R912 ,R941				
	R117 ,R118	QRD161J-684	CARBON RESISTOR		6
	R145 ,R217				
	R218 ,R245				
	R305 ,R405	QRD161J-823	CARBON RESISTOR		2
	R203	2SC1684(R,S)	TRANSISTOR		0
	C939 ,C940	QCF11HP-103	C CAPACITOR		2
	C106 ,C119	QCS11HJ-151	C.CAPACITOR		7
	C206 ,C219				
	C311 ,C411				
	C904				
	C342 ,C442	QCS11HJ-181	C.CAPACITOR		2
	C104 ,C204	QCS11HJ-221	C.CAPACITOR		4
	C320 ,C420				
	C343 ,C443	QCS11HJ-331	C.CAPACITOR		2
	C103 ,C117	QCS11HJ-471	C.CAPACITOR		4
	C203 ,C217				
	C101 ,C201	QCS11HJ-561	C CAPACITOR		4
	C300 ,C400				
	C312 ,C412	QCS32HJ-151ZV	C CAPACITOR		2
	C102 ,C202	QCY41HK-102	C.CAPACITOR		2
	C301 ,C401	QCY41HK-332	C.CAPACITOR		2
	C118 ,C218	QEB51EM-475M	E.CAPACITOR		2
	C105 ,C205	QEB61EM-475ZM	LLC E CAPACITOR		2
	C306 ,C406	QEB61HM-334ZM	LLC E CAPACITOR		2
⚠	C935	QETA1CM-108VM	E CAPACITOR		1
	C800	QETA1CM-227M	E CAPACITOR		1
	C901	QETC1CM-227ZM	E.CAPACITOR		1
	C915	QET41AR-107	E CAPACITOR		1
	C107 ,C120	QET41AR-476	E CAPACITOR		4
	C207 ,C220				
	C802	QET41AR-477	E CAPACITOR		1
	C934	QET41CR-108	E CAPACITOR		1
	C905	QET41CR-227	E CAPACITOR		1
⚠	C937	QET41CR-477	E CAPACITOR		1
	CA101,CA201	QET41ER-106	E CAPACITOR		19
	CA901,C109				
	C122 ,C209				

⚠	REF. NO	PARTS NO.	PARTS NAME	REMARKS	QTY
	C222 ,C504 C515 ,C516 C604 ,C615 C616 ,C804 C903 ,C908				
	C910 ,C928 C945 C936 C341 ,C441 C938	 QET41ER-108 QET41ER-226 QET41ER-228	 E CAPACITOR E CAPACITOR E CAPACITOR	 	 1 2 1
	CA102,CA202 C307 ,C407 C500 ,C501 C506 ,C600 C601 ,C606	QET41HR-105	E.CAPACITOR		19
	C801 ,C902 C906 ,C907 C909 ,C946 C947 -C949 C340 ,C440	 QET41HR-224	 E.CAPACITOR	 	 2
	C308 ,C408 C920 C509 ,C514 C609 ,C614 C508 ,C513	QET41HR-335 QET41HR-475 QET61HR-225ZM QET61HR-684ZN	E.CAPACITOR E CAPACITOR E.CAPACITOR E.CAPACITOR	 	2 1 4 4
	C608 ,C613 C502 ,C602 C302 ,C402 C503 ,C603 C926	 QFN41HJ-152 QFN41HJ-272 QFN41HJ-332 QFN41HJ-472	 M.CAPACITOR M.CAPACITOR M.CAPACITOR M.CAPACITOR	 	 2 2 2 1
	C121 ,C221 C309 ,C409 C925 C108 ,C125 C208 ,C225	QFN41HJ-562 QFP82AJ-103 QFV41HJ-103	M.CAPACITOR P.P.CAPACITOR TF CAPACITOR	 	4 1 8
	C505 ,C511 C605 ,C611 C507 ,C510 C607 ,C610 C927	 QFV41HJ-183 QFV41HJ-223	 M.CAPACITOR M.CAPACITOR	 	 4 1
	C512 ,C612 C310 ,C410 J3 J4 J1 ,J2	QFV41HJ-823 QFV71HJ-123ZM EMN00TV-402A QMC9014-008 QMS6313-017	TF CAPACITOR TF CAPACITOR PIN JACK DIN SOCKET JACK	 TD-W20G MIC	2 2 1 1 2
	F11 TP1	VMZ0043-001S VMZ0015-001	FUSE CLAMP PIN	TD-W20A/B/E/G FUSE	2 1

Exploded View of Enclosure Assembly

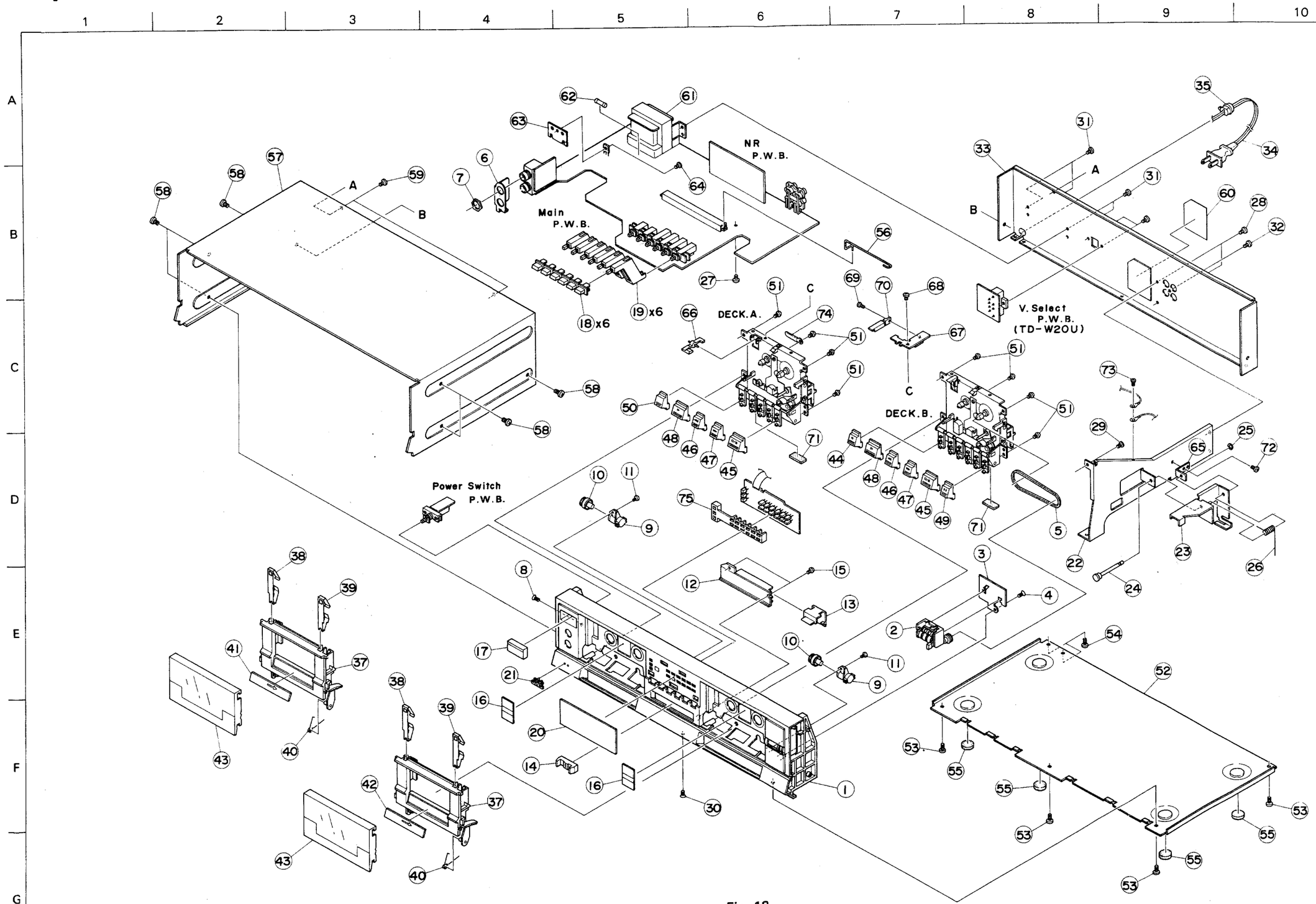


Fig. 18

Exploded View of Mechanism Assembly

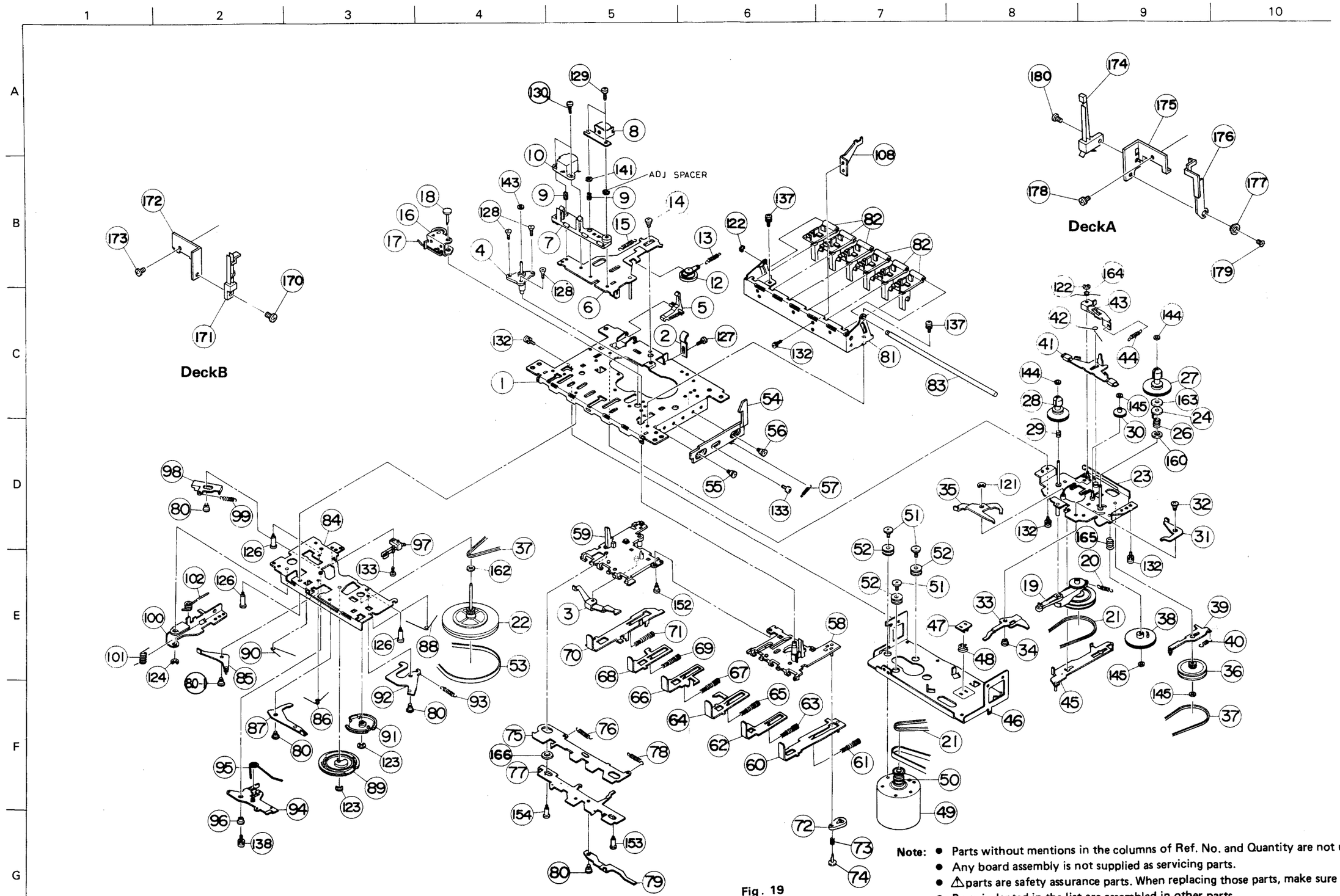


Fig. 19

Note:
- Parts without mentions in the columns of Ref. No. and Quantity are not used.
- Any board assembly is not supplied as servicing parts.
- ⚠parts are safety assurance parts. When replacing those parts, make sure to use the specified one.
- Parts indented in the list are assembled in other parts.

Enclosure Assembly Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
⚠	1,16,20,21	ZCTDW20□-FSL	FRONT PANEL ASS'Y	(SL)	1
⚠	1,16,20,21	ZCTDW20□-FBK	FRONT PANEL ASS'Y	(BK)	1
⚠	1	VJC1450-003UL	FRONT PANEL	TD-W20J (SL)	1
⚠		VJC1456-002UL	FRONT PANEL	TD-W20J (BK)	1
		VJC1450-005	FRONT PANEL	(SL)	
		VJC1450-004	FRONT PANEL	(BK)	1
	2	VKC5183-001T	COUNTER		1
	3	VKL5900-001	COUNTER BRACKET		1
	4	SSSF3010Z	SCREW	COUNTER BRAKET	1
	5	VKB3000-093	BELT(R)	COUNTER	1
	6	VKL5909-001	BRACKET		1
	7	VKZ4150-001	SPECIAL NUT	MIC JACK	1
	8	SSST3006Z	SCREW		1
	9	VYH5033-002	DAMPER HOLDER		2
	10	VYH4769-002	GEAR	GRESE G-332	2
	11	SDSF3010Z	SCREW	DUNPER	2
	12	VKS4805-001	BLIND	SLIDE KNOB	1
	13	VKS4806-001	SLIDER	SLIDE KNOB	1
	14	VXS4156-001	SLIDE KNOB	INPUT LEVEL	1
	15	SDSF3006Z	SCREW	BLIND	2
	16	VJD4896-001	PLATE	DECK A,B	2
	17	VXP3131-001	POWER KNOB		1
	18	VXP4216-003	PUSH BUTTON	NR/TAPE ...	6
	19	VKS4808-001	BAR	PUSH KNOB	6
	20	VJK4246-001	FINDER		1
	21	E70913-002	MARK	(SL)	1
		E70913-001	JVC MARK	(BK)	
	22	VKL3674-001	AMP CHASSIS		1
	23	VKL5901-002	REC ARM		1
	24	VKH4771-001	SHAFT		1
	25	REE3000X	E-WASHER		1
	26	VKW4399-001	SPRING		1
	27	SDST3006Z	SCREW	P.C.B.-CHASSIS	1
	28	SDST3006Z	SCREW	CHASSIS-REAR	2
	29	SDSF3006Z	SCREW	CHASSIS-PANEL	1
	30	SSSF3006Z	SCREW	CHASSIS-PANEL	1
	31	LPSP3006Z	SCREW	POWER TRANS	4
	32	SDSF3006Z	SCREW	PIN JACK	1
	32-1	E48729-002	RIVET	TD-W20G DIN JACK	2
	33	VJC2194-001	REAR PANEL	TD-W20A/B/C/E/J	1
		VJC2194-002	REAR PANEL	TD-W20U	1
		VJC2194-003	REAR PANEL	TD-W20G	1
⚠	34	QMP1200-200	POWER CORD	TD-W20C/J	1
⚠		QMP2560-200	POWER CORD	TD-W20A	1
⚠		QMP3900-200	POWER CORD	TD-W20E/G	1
⚠		QMP7600-200	POWER CORD	TD-W20U	1
⚠		QMP9017-008BS	AC CORD	TD-W20B	1
⚠	35	QHS3876-162	S.R.BUSHING	TD-W20A/C/E/G/J/U	1
⚠		QHS3876-162BS	S.R.BUSHING	TD-W20B	1
	37~39,41	ZCTDW20-CH-A	CASSETTE HOLDER ASS'Y	DECK A	1
	37~39,42	ZCTDW20-CH-B	CASSETTE HOLDER ASS'Y	DECK B	1
	37	VJT2106-001	CASSETTE HOLDER		2
	38	VKY4271-005	C.SPRING	LEFT	2
	39	VKY4271-006	C.SPRING	RIGHT	2
	40	VKW4584-001	SPRING		2

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	41	VJD4895-005	DOOR PLATE	DECK A	1
	42	VJD4895-003	HOLDER PLATE	DECK B	1
	43	VJT3140-005	LID		2
	44	VXP3129-001	PUSH BUTTON	(SL) REC	1
		VXP3129-007	PUSH BUTTON	REC (BK)	1
	45	VXP3129-002	PUSH BUTTON	(SL) STOP/EJECT	2
		VXP3129-008	PUSH BUTTON	STOP/EJECT (BK)	1
	46	VXP3129-003	PUSH BUTTON	(SL) REW	2
		VXP3129-009	PUSH BUTTON	REW (BK)	1
	47	VXP3129-004	PUSH BUTTON	(SL) FF	2
		VXP3129-010	PUSH BUTTON	FF (BK)	1
	48	VXP3129-005	PUSH BUTTON	(SL) PLAY	2
		VXP3129-011	PUSH BUTTON	PLAY (BK)	1
	49	VXP3129-006	PUSH BUTTON	(SL) PAUSE	1
		VXP3129-012	PUSH BUTTON	PAUSE (BK)	1
	50	VXP4484-001	PUSH BUTTON	(SL) DUBING	1
		VXP4484-002	PUSH BUTTON	DUBING (BK)	1
	51	SDSF3010Z	SCREW	MECHA	8
	52	VJC2192-001	BOTTOM COVER		1
	53	SDSF3006Z	SCREW	FRONT SIDE (BOTTOM)	3
	54	SDST3006Z	SCREW	REAR SIDE (BOTTOM)	3
	55	VJF4003-002	FOOT	BOTTOM	4
	56	VKW4567-002	REC WIRE		1
	57	VJC2193-002	TOP COVER	(SL)	1
		VJC2193-001	TOP COVER	(BK)	
	58	SDSB4010R	SCREW	TOP COVER (SL)	6
		SDSB4010M	SCREW	TOP COVER (BK)	1
	59	SDST3006Z	SCREW	TOP COVER (SL)	2
		SDST3006M	SCREW	TOP COVER (BK)	1
	60	VYN2162-002PA	NAME PLATE	TD-W20B	1
		VYN2162-003PA	NAME PLATE	TD-W20A	1
		VYN2162-004PV	NAME PLATE	TD-W20C	1
		VYN2162-005PA	NAME PLATE	TD-W20E	1
		VYN2162-006PA	NAME PLATE	TD-W20J	1
		VYN2162-007PA	NAME PLATE	TD-W20U	1
		VYN2162-008PA	NAME PLATE	TD-W20G	1
⚠	61	VTP54A2-041B	POWER TRANSF.	TD-W20C/J	1
⚠		VTP54M2-031B	POWER TRANSF.	TD-W20A/E/G	1
⚠		VTP54M2-031BBS	POWER TRANSF.	TD-W20B	1
⚠		VTP54N2-031B	POWER TRANS	TD-W20U	1
⚠	62	QMF51A2-R63	FUSE	TD-W20A/E/G/U	1
⚠		QMF51A2-R63BS	FUSE	TD-W20B	1
	63	VKL5002-001	HEAT SINK	Q920	2
	64	DPSP3008Z	SCREW	HEAT SINK	2
	65	VKL5917-001	BRACKET		1
	66	VKS4833-001	ACTUATER	DECK A TAPE SELECT	1
	67	VKL5945-001	BRACKET	DECK A TAPE SELECT	1
	68	SPST2604Z	SCREW	DECK A TAPE SELECT	1
	69	SDSP2605Z	SCREW	DECK A TAPE SELECT	1
	70	VSH1141-001	LEAF SWITCH	DECK A TAPE SELECT	1
	71	VYSH104-022	SPACER	DECK A/B	2
	72	SDST3006Z	SCREW		1
	73	SDST3006Z	SCREW		1
	75	VJD3557-001	HOLDER		1

Mechanism Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	18200101T	CHASSIS BASE		1
	2	18200102T	PACK SPRING		1
	3	18200202T	STOPPER		1
	4	18201207T	FLYWHEEL METAL		1
	5	18000201T	REC.S. LEVER	DECK B	1
	6	182003501ZT	HEAD PANEL		1
	7	18200311T	HEAD BASE		1
	8	HY424854VVS	R/P HEAD	DECK B	1
		HY424854VVS	P. B. HEAD	DECK A	1
	9	14400315T	HEAD SPRING	R/P HEAD	1
	9-1	14400312T	HEAD SPRING	ERASER HEAD	1
	10	E-321	E HEAD	DECK B	1
		VKS4710-001	DUMMY HEAD	DECK A	1
	12	182003301ZT	T-UP ROLLER	PLATE ASS'Y	1
	13	18200312T	SPRING	T-UP ROLLER PLATE	1
	14	17100319AT	SCREW		1
	15	18200302T	SPRING	HEAD PANEL	1
	16	182004303ZT	PINCH ROLLER		1
	17	18200403T	P.ROLLER SPRING		1
	18	17152015T	STOPPER		1
	19	182007301ZT	RF.CLUTCH ASS'Y		1
	20	18200704T	SPRING	RF.CLUTCH ARM	1
	21	17150606T	RF. BELT		1
	22	182012301ZT	FLYWHEEL ASS'Y		1
	23	182005505ZT	BRACKET		1
	24	18200814T	A.DETECT PIECE		1
	26	18200817T	A.S.D.PIECE SPRING		1
	27	182006301ZT	TAKE UP DISK		1
	28	180006302ZT	SUPPLY DISK		1
	29	18200604T	SPRING		1
	30	18000610T	GEAR	FF	1
	31	18200910T	T.R KICK LEVER	DECK B	1
	32	18200818T	COLLAR SCREW	DECK B	1
	33	18200805T	AUTO STOP LEVER		1
	34	18200811T	COLLAR	AUTO STOP LEVER	1
	35	18200911T	KICK LEVER	DECK B	1
	36	18200801T	PULLEY		1
	37	18200809T	BELT	AUTO STOP	1
	38	18200802T	CAM GEAR		1
	39	18200803AT	DETECT LEVER		1
	40	18200810T	DETECT LEVER SPRING		1
	41	182009301ZT	BRAKE ARM		1
	42	18200902T	BRAKE SPRING		1
	43	18200905T	A.S.G.LEVER		1
	44	18200913T	LEVER SPRING		1
	45	18200903AT	LEVER		1
	46	18201301T	FM BRACKET		1
	47	18201302T	FL.THRUST PLATE		1
	48	18201310T	THRAST SPRING		1
⚠	49	EG-500AD-2B	DC MOTOR		1
	50	18201308T	MOTOR PULLEY		1
	51	18201305T	COLLAR SCREW	MOTOR	3
	52	18201306T	MOTOR RUBBER	MOTOR	3
	53	18201303T	CAPSTAN BELT		1
	54	18201401T	EJECT LEVER		1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

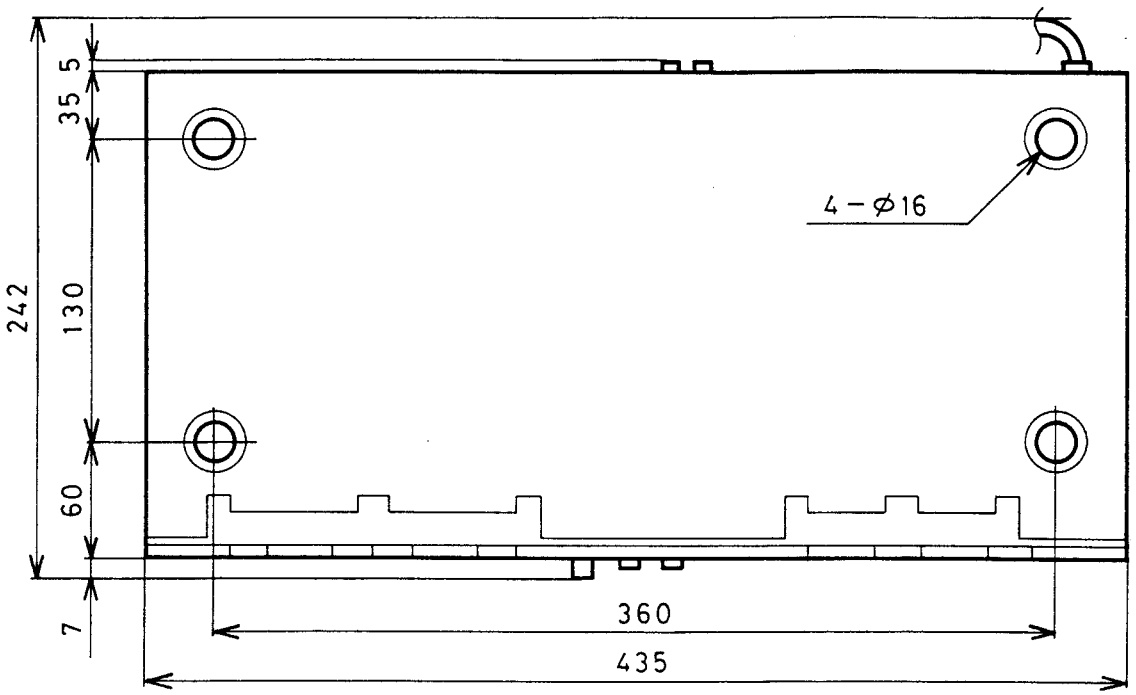
⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	55	LPSP2006Z	SCREW		1
	55-1	18201402T	COLLAR		1
	56	SPSP2605Z	SCREW		1
	56-1	18201403T	COLLAR		1
	57	15590306T	SPRING	EJECT SLIDE LEVER	1
	58	18201001AT	BUTTON BASE (L)		1
	59	18201002AT	BASE		1
	60	182010505ZT	LEVER	PAUSE BUTTON DECK B	1
	61	18201026T	LEVER SPRING	DECK B	1
	62	18201022T	LE /ER	STOP BUTTON	1
	63	18201027T	BUTTON LEVER SPRINGO		1
	64	18201021T	LEVER	FF BUTTON	1
	65	18000903T	B.LEVER SPRING		1
	66	18201020T	LEVER	REW BUTTON	1
	67	18201026T	LEVER SPRING		1
	68	18201019T	LEVER	PLAY BUTTON	1
	69	18201026T	LEVER SPRING		1
	70	18201018T	LEVER	REC.BUTTON	1
	71	18201026T	LEVER SPRING		1
	72	18201041T	PAUSE LEVER	DECK B	1
	73	18201034T	LEVER SPRING	DECK B	1
	74	18201032T	STOPPER	DECK B	1
	75	18201042T	BUTTON CAM		1
	76	18201052T	STOPER SPRING	BUTTON CAM	1
	77	18201010T	SWITCH CAM		1
	78	18201031T	SPRING	SWITCH CAM	1
	79	18201011T	KICK LEVER		1
	80	18200819T	SCREW		1
		18200819T	SCREW	REC.FUNCTION	1
		18200819T	SCREW	DECK B	1
		18200819T	SCREW	DECK B	1
	80-1	18201137T	SCREW	M.TRIGGER ARM	1
	81	18201015T	BUTTON FRAME		1
	82	18201028T	FUNCTION LEVER		6
	83	18201016T	LEVER SHAFT		1
	84	182011501ZT	CHASSIS BASE	DECK B	1
		182011527ZT	SUB CHASSIS ASS'Y	DECK A	1
	85	182011510ZT	ARM ASS'Y		1
	86	18201126T	SPRING	M.TRIGGER ARM	1
	87	182011503ZT	ARM ASS'Y	DECK B	1
	88	18201127T	SPRING	DECK B	1
	89	18201103T	MAIN GEAR		1
	90	18201131T	SPRING	MAIN GEAR	1
	91	18201104T	PAUSE GEAR	DECK B	1
	92	182011504ZT	PAUSE ARM ASS'Y	DECK B	1
	93	17000932T	SPRING	DECK B	1
	94	182011505ZT	LIFT ARM ASS'Y		1
	95	18201129T	SPRING	LIFT ARM	1
	96	18201130T	COLLAR	LIFT ARM	1
	97	64010170T	LEAF SWITCH	MSW-1412TNBK	1
	98	18201121T	PLATE	REC.FUNCTION	1
	99	17001612T	SPRING	REC.FUNCTION PLATE	1
	100	18201122T	RECORDING ARM		1
	101	18201124T	SPRING	REC.ARM	1
	102	18201136T	SPRING	REC.DAMPER	1

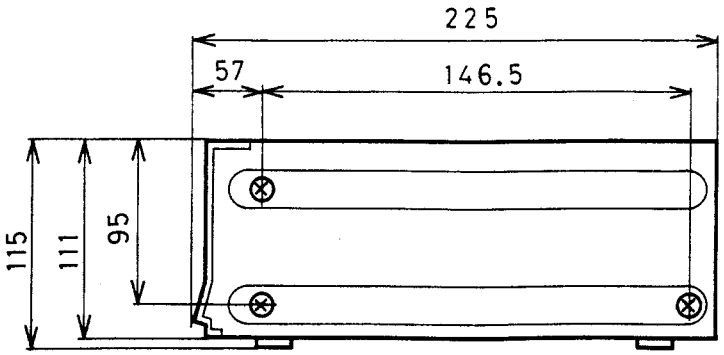
⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	108	18201035T	B.SHAFT STOPPER		1
	121	REE1200	E.RING	KICK LEVER DECK B	1
		REE2000	E.RING	DECK B	1
	122	REE1500	E.RING	LEVER SHAFT	1
		REE1500	E.RING		1
	123	REE2000	E.RING		1
	124	REE3000	E.RING		1
	126	18201137T	SCREW		3
	127	SPST2603Z	TH.TAP.SCREW	PACK SPRING	1
	128	SSSK2030M	MINI SCREW	FL METAL	3
	129	SPSX2007Z	PM. SCREW	R/P HEAD	2
	130	SPSP2008Z	SCREW	ERASER HEAD	2
	132	LPSP2004Z	ASSY SCREW		1
		LPSP2004Z	ASSY SCREW		1
		LPSP2004Z	ASSY SCREW	RELL BRACKET	2
	133	SPSP2004Z	SCREW		1
		SPSP2004Z	SCREW	FM BRACKET	1
	137	LPSP2604Z	SCREW		2
	138	LPSP2606Z	SCREW		1
	141	93160000T	WASHER		1
	143	93720000T	WASHER	OIL CUT	1
	144	94970000T	E-RING		1
		94970000T	E-RING	T-UP REEL 1.5 X 3	1
	145	94210000T	POLY.WASHER	PULLEY	1
		94210000T	POLY.WASHER	FF GEAR	1
		94210000T	POLY.WASHER	CAM GEAR	1
	152	18201025T	SCREW		1
	153	18201029T	COLLAR SCREW		1
	154	18201030T	SCREW		1
	160	97910000T	POLY WASHER		1
	162	97890000T	P.SLIDER WASER	THRUST	1
	163	18200807T	FELT		1
	164	18200914T	SPRING	DECK B	1
	165	18200821T	CAM GEAR SPRING	DEAK B	1
	166	18201068T	SPACER		1
	170	91160000T	SCREW	DECK B	1
	171	64010172T	PAUSE SW	"	1
	172	18201140T	SW. BRACKET	"	1
	173	90770000T	SCREW	"	1
	174	64050117T	LEAF SW	DECK A	1
	175	18201177T	SW. BRACKET	"	1
	176	18201178T	SW. LEVER	"	1
	177	18200806T	COLLAR	"	1
	178	90770000T	SCREW	"	1
	179	95660000T	"	"	1
	180	91160000T	"	"	1

Note:
Entry of the assembly part number
ZCTDW20 □ -FSL
↑ Enter the cord name which is on the neme plate and order the part.

Dimensions





Unit : mm

Fig. 20

Packing

Positions of Controls and Switch Knobs at Renewed Packing

POWER Switch	: OFF
NR SYSTEM Switch	: OFF
TAPE SELECT Switch	: NORMAL
INPUT LEVEL Volume Control	: MAX
TAPE COUTER	: 000
Mechanism Operation Button	: OFF

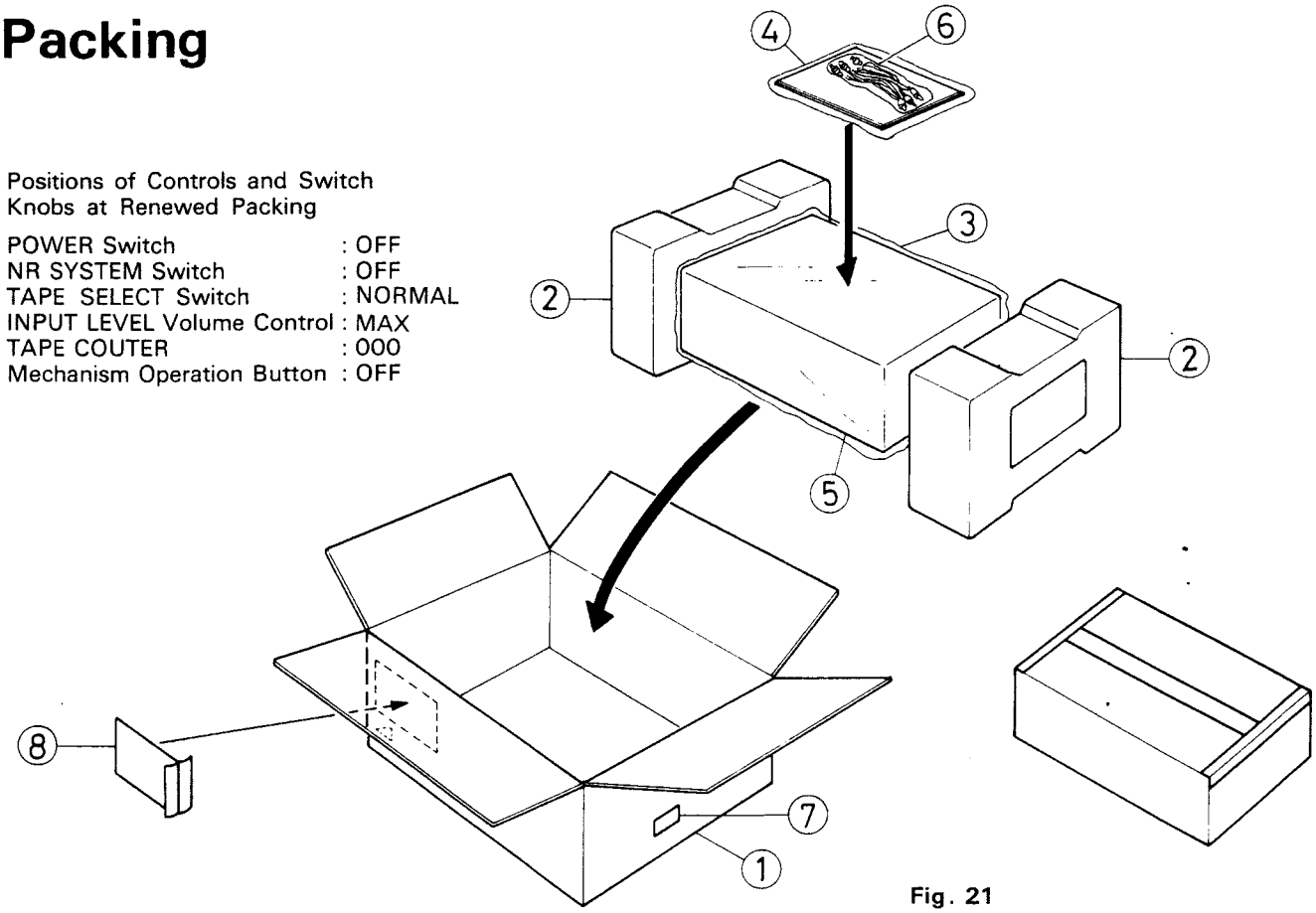


Fig. 21

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	1	VPC2162-002	Carton	TD-W20 B(BK) or VPC2158-002(SL)	1
	"	-003	"	TD-W20 A(BK) or " -003(SL)	1
	"	" -004	"	TD-W20 C(BK) or " -004(SL)	1
	"	" -005	"	TD-W20 E(BK) or " -005(SL)	1
	"	" -006	"	TD-W20 J(BK) or " -006(SL)	1
	"	" -007	"	TD-W20 U(BK) or " -007(SL)	1
	"	" -008	"	TD-W20 G(BK) or " -008(SL)	1
	2	VPH2180-001	Cushion	for Unit	2
	3	VPE3005-026	Poly Bag		1
	4	VPE3005-007	"	for Instruction	1
	5	TKS000501-08	Sheet		1
	–	Q04141H	Wire Clamp	for Power Cord	1
	7	VPZ4001-001	Serial Ticket		1
	8	E66416-003	Envelope	TD-W20 J/U (PX,EES)	1

Accessories

⚠	Ref. No.	Parts. No.	Parts Name	Remarks	Q'ty
		VNN0170-301	Instrùction Book	TD-W20B/E/G	1
		VNN0170-901	"	TD-W20A/C/J/U	1
		VMP0039-00B	Pin Cord		2

JVC
VICTOR COMPANY OF JAPAN, LIMITED.
RADIO & RECORDING MACHINE DIVISION 10-1, 1-chome, Ohwatari-cho, Maebashi-city 371, Japan

Printed in Japan
—6008—S—